

DETAILED ACTION

1. This application has been examined. The claims 1-12 are pending. The examination results are as following.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoeckl (US 5,300,926 admitted by applicant) in view of FRICKER et al. (US 2001/0013855).

As to claim 1, Stoeckl discloses in figs. 1 and 8, a dental apparatus which comprises a dental device, a graphic display (display elements, see col. 8, line 37-38) and a user interface (touch screen keyboard 74, fig. 8) connected functionally to one another (see serial interface 73), the user interface (74) being arranged to be used for controlling functions (by soft keys or foil keys 61-62, fig. 7 see col. 8, lines 20-30) of the dental device, wherein

the user interface is a touch screen keyboard 74, and the graphic display (display elements) comprises means for showing symbols (light spots) describing the control functions of the dental device (see col. 8, lines 38-53) and a cursor (see picture screen cursor, see col. 7, lines 62-63), and the dental apparatus further comprises means for moving (see by hand, see col. 8, lines 22-24) and controlling the cursor (picture screen) in response to a touch of a pointer means (start point, see col. 10, lines 3-12) and its movement should be on the a surface of the touch

screen keyboard 74, (see when displaying the visual field by a picture screen, to arrange a foil keyboard or a touch screen on the picture screen, see col. 8, lines 20-22). However, Stoeckl does not specifically disclose the user interface is a touchpad. FRICKER et al. disclose in figs. 1-2, a digital system (100) comprising a touch pad (200) having capacitive sensor 230, see fig. 2, see 0045).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the digital system comprising a touch pad as taught by FRICKER et al. into the dental apparatus having a graphic display of Stoeckl for producing the claimed invention because this would provide capacitive sensor will the presence of a finger, but will not detect the presence of a pen (see Stoeckl, see 0052).

As to claim 2, Stoeckl discloses the dental apparatus further, wherein the functional connection between the touch screen keyboard and the graphic display is arranged through a computer (see touch screen keyboard control the individual functions of the apparatus by hand, and the visual field can also be provided with soft keys, see col. 8, lines 24-30). However, Stoeckl does not disclose the user interface (touch screen keyboard) is a touch pad. FRICKER et al. disclose in figs. 1-2, a digital system (100) comprising a touch pad (200) having capacitive sensor 230, see fig. 2, see 0045) as discussed in claim 1.

As o claim 3, Stoeckl discloses the dental apparatus further, wherein the touch screen keyboard is arranged to control the computer functionally connected to the dental device. However, Stoeckl does not disclose the user interface (touch screen keyboard 74) is a touch pad.

FRICKER et al. disclose in figs. 1-2, a digital system (100) comprising a touch pad (200) having capacitive sensor 230, see fig. 2, see 0045) as discussed in claim 1.

As to claim 4, Stoeckl discloses the dental apparatus, wherein the touch screen keyboard (74) is arranged to control the dental device through the computer (see col. 8, lines 22-30). However, Stockl does not disclose the touch screen keyboard is a touch pad. FRICKER et al. disclose in figs. 1-2, a digital system (100) comprising a touch pad (200) having capacitive sensor 230 and resistive sensor 210, see fig. 2, see 0045) as discussed in claim 1.

As to claim 5, Stoeckl discloses a dental apparatus further, wherein the pointer means (start point). However, Stoeckl does not disclose specifically the pointer means is a pointer pen or finger. FRICKER et al. disclose in fig. 2, a touch pad 200 comprising a pointer is a pen or finger (260, see pointing element 260 as finger or pen, see [0032]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the pointer means is a finger or pen as taught by FRICKER et al. into the apparatus having graphic display of Stoeckl for producing the claimed invention because this would provide to the user may use to point and move on the touch pad, see [0032]).

As to claim 6, Stoeckl does not disclose further the touch pad comprises a capacitive or a resistive contact surface. FRICKER et al. disclose in figs. 1-2, a digital system (100) having a touch pad (200) comprising a capacitive sensor 230 and a resistive sensor 210, see fig. 2, see 0045).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the digital system having a touch pad comprising a capacitive sensor and

a resistive sensor as taught by FRICKER et al. into the dental apparatus having a graphic display of Stoeckl for producing the claimed invention because this would provide the capacitive sensor will the presence of a finger, but will not detect the presence of a pen (see Stoeckl, see 0052).

As to claim 9, Stoeckl discloses a dental, wherein the touch screen keyboard is integrated into the dental apparatus (because the touch screen keyboard 74 control the individual functions of the apparatus (see col. 8, lines 23-24). However, Stoeckl does not specifically disclose the user interface is a touchpad. FRICKER et al. disclose in figs. 1-2, a digital system (100) comprising a touch pad (200) having capacitive sensor 230 and resistive sensor 210, see fig. 2, see 0045) as discussed in claim 1.

As to claim 10, Stoeckl discloses in fig. 1, a dental apparatus, wherein the touch screen keyboard (74) and a back rest (12) of a patient chair included in the dental apparatus. However, Stoeckl does not specifically disclose the touch screen keyboard is a touch pad and the touch pad is arranged to be placed under a back rest of a patient chair included in the dental apparatus. FRICKER et al. disclose in figs. 1-2, a digital system (100) comprising a touch pad (200) having capacitive sensor 230, and mounted on a substrate 240, see fig. 2, see 0031).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the digital system comprising a touch pad as taught by FRICKER et al. into the dental apparatus having a graphic display of Stoeckl for producing the claimed invention because this would provide capacitive sensor will the presence of a finger, but will not detect the presence of a pen (see Stoeckl, see 0052).

Stoeckl and FRICKER et al. also do not specifically disclose the touch pad is arranged to be placed under a back rest.

It would have been obvious design choice to have the touch pad is arranged to be placed under a back rest as the claimed invention since such a modification would have involved a mere to shift location of parts of the apparatus. A shifting in location is generally recognized as being within the level of ordinary skill in the art touch pad can placed anywhere in the apparatus.

See In re Japikse, 86, USPQ 70 (CCPA 1950).

As to claim 11, Stoeckl discloses a dental apparatus, wherein the touch screen keyboard (74) is arranged to form control information (microcontroller 70, fig. 9) for the dental device through the computer (touch screen keyboard, see col. 8, lines 22-30) so that the control information (70) is modified on the basis of the patient information included in the computer (corresponds to microcontroller controls the individual operator elements are connected to the serial interface 73, and controlling a drive motor for adjusting the height of the dental chair, see col. 8, lines 66-68, and col. 9, lines 1-9).

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stoeckl (US 5,300,926 admitted by applicant) in view of FRICKER et al. (US 2001/0013855) as applied to claim 1 above, and further in view of Lordo (US 5,558,371)

As to claim 8, Stoeckl discloses a dental apparatus, having touch screen keyboard. FRICKER et al. disclose a layer of paint (not shown) may be applied directly substrate 240, and a material (not shown) may also applied to the surface of the substrate of substrate 240 to give an

appropriate feel and texture to touchpad (200, see 0047). However, Stoeckl and FRICKER et al. do not specifically disclose wherein a detachable and disinfectable or disposable film is arranged to be attached to the contact surface.

Lordo discloses in fig. 1, a resuscitator apparatus comprising a detachable and disinfectable and disposable film is attached to the squeeze bag (see col. 12, lines 8-23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the a detachable and disinfectable or disposable film as taught by Lordo attached to the contact surface of FRICKER' s system for producing the claimed invention because this would provide a product of low cost and high reliability and also easy to perform by any hospital technician or other health care worker (see col. 12, lines 11-12 and lines 15-16).

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stoeckl (US 5,300,926 admitted by applicant) in view of Smith (US 6,204,837).

As to claim 12, Stoeckl discloses in figs. 1, 8, a method of controlling a dental apparatus, which comprises a dental device, a graphic display (display elements, see col. 8, lines 37-38) and a user interface (touch screen keyboard) connected functionally to one another (see serial interface 73), the user interface being used to control functions of the dental device (see col. 8, lines 20-24), wherein the user interface is a touch screen keyboard which is functionally connected to the graphic display (see soft keys can serve the purpose of manual actuation of the functions displayed on the picture screen (see col. 8, lines 20-28), which is used to show symbols (light spots) describing the control functions of the dental device and a cursor (see picture screen cursor, see col. 7, lines 62-63), which can be moved and controlled through the touch screen

keyboard, whereby the dental apparatus is controlled by moving the cursor (picture screen cursor) on the display to the desired control function symbol. However, Stoeckl does not specifically disclose the touch screen keyboard is touchpad and desired control function symbol by selecting the function in question.

Smith discloses in fig. 1, an apparatus and method for configuring a computing device having a touchpad (25, see col. 2, lines 50-51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the touch pad as taught by Smith into the dental apparatus having graphic display of Stoeckl for producing the claimed invention because this would be configured for positioning main cursor or as an input for a stylus or pen (see col. 2, lines 52-54).

Smith also discloses selecting the function in question with multiple pointing devices (see figs. 2-5, see pointer control selected ? (102), display functions 114, function selected ? (116), touchpad selected? (108), fig. 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement selecting the function in question as taught by Smith into the dental apparatus having graphic display of Stoeckl for producing the claimed invention because this would provide to the user as appropriate and the selected function is assigned to the appropriate device (see col. 3, lines 47-50).

Allowable Subject Matter

6. **Claim 7** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The present invention is directed to a dental apparatus which comprises a dental device, a graphic display and a user interface connected functionally to one another, the user interface being arranged to be used for controlling functions of the dental device, wherein the user interface is a touch pad, and the graphic display comprises means for showing symbols describing the control functions of the dental device and a cursor, and the dental apparatus further comprises means for moving and controlling the cursor in response to a touch of a pointer means and its movement on the a surface of the touch pad. The combination of the closest prior art of Stoeckl (US 5,300,926), FRICKER et al. (US 2001/0013855)Smith (6,204,837) and Lordo (US 5,558,371) shown a similar invention, however they fail to teach or suggest that wherein the touch pad is arranged to form control information for the dental device in response to the fact that the contact surface of the touch pad is pressed or something slides on it so that the material layers included in the touch pad touch one another at the a point in question, in which case the a current flow is interrupted in the an electrode network included in the touch pad.

Response to Arguments

7. Applicant's arguments filed 11/4/09 have been fully considered but they are not persuasive.

Applicant states that "Referring to claim 1, the Examiner points to Stoeckl column 8, lines 38-53 as teaching "symbols" describing the control functions. Applicant maintains that Stoeckl's so called "light spots" do not equate the symbols of the subject invention. The light spots do not constitute symbols which are designed to be selected, they merely indicate one at a given time the selection (or "the move") having been made "elsewhere". In other words, the light spots do not constitute means via which a function can be selected, they merely function as indication lights.

"The Examiner also points to Stoeckl column 8, lines 22-24 as teaching controlling functions, i.e moving the cursor by hand. Column 8, lines 22-24 reads as follows: "The addition of such a touch screen makes it possible to also control the individual functions of the apparatus by hand." This teaching is that of a picture screen with an integrated keyboard-type interface used to control the functions manually. There is no teaching of displaying and using a cursor. Applicant points out that in this regard the picture screen cannot be both the screen and the cursor".

Examiner respectively disagrees because Stoeckl discloses in figs. 1 and 8, a dental apparatus which comprises a dental device, a graphic display (display elements, see col. 8, line 37-38) and a user interface (touch screen keyboard 74, fig. 8), the user interface (74) being arranged to be used for controlling functions (by soft keys or foil keys 61-62, fig. 7 see col. 8, lines 20-30) of the dental device, wherein the user interface is a touch screen keyboard 74, and the graphic display (display elements) comprises means for showing symbols (light spots) describing the control functions of the dental device (see col. 8, lines 38-53) and a cursor (see picture screen cursor, see col. 7, lines 62-63), and the dental apparatus further comprises means

for moving (see by hand, see col. 8, lines 22-24) and controlling the cursor (picture screen) in response to a touch of a pointer means (start point, see col. 10, lines 3-12) and its movement should be on the a surface of the touch screen keyboard 74, (see when displaying the visual field by a picture screen, to arrange a foil keyboard or a touch screen on the picture screen, see col. 8, lines 20-22). Furthermore, Stoeckl does teach the displaying and using a cursor is "Light spot along a limb in this embodiment can be defined by a picture screen cursor", see col. 7, lines 62-64). Therefore, clearly, Stoeckl discloses every feature of the claimed invention, except the user interface is a touchpad. Then, FRICKER et al. disclose in figs. 1-2, a digital system (100) comprising a touch pad (200) having capacitive sensor 230, see fig. 2, see 0045). Thus, the combination of Stoeckl and FRICKER et al. are satisfied for their intended purpose. For these reasons, the rejections are maintained.

8. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIMNHUNG NGUYEN whose telephone number is (571)272-7698. The examiner can normally be reached on MON-FRI, FROM 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/K. N./

Examiner, Art Unit 2629

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